

**REMARKS**

Claims 1, 2 and 4-13 are pending in the Application and claims 1, 2, 4-6 and 11-13 stand rejected. Claims 4 and 5 are hereby canceled by this Amendment without prejudice or disclaimer.

Applicants thank the Examiner for considering the references cited with the Information Disclosure Statement filed July 3, 2007.

**Allowable Subject Matter**

The Examiner objected to claims 7-10 as being dependent upon a rejected base claim, but indicated these claims would be allowed if rewritten in independent form. However, Applicants will hold such rewriting in abeyance at this time, as the base claims from which these claims depend are believed to be patentable for the reasons explained below.

**Claim Rejections – 35 U.S.C. § 103(a)**

The Examiner rejected claims 1, 2, 4-6 and 12-13 under § 103(a) as being unpatentable over WO 01/17806 A1 (hereinafter ‘806) in view of Aubel et al. (US 6,921,197).

In the rejection, the Examiner contends ‘806 discloses most of the features recited in the claims but concedes ‘806 fails to explicitly imply the driver would want to know the end life of the tire as a function of temperature. To compensate for this deficiency, the Examiner applies Aubel contending it discloses embedding a temperature sensor in a tire, evaluating the condition of the tire with respect to the run time and an integral of the output temperature. The integral being indicative of a wear signal such that when the integral exceeds a threshold level, the device indicates a wear signal for the tire. (*Office Action*. p. 2 - 3).

In response, Applicants submit that even if the applied references could somehow be combined as suggested, the suggested combination fails to disclose or fairly suggest at least:

- (1) wherein the temperature of the tire is an atmosphere temperature inside the tire; and
- (2) wherein after the previous setting of a limit temperature being statistically the occurrence of the trouble state when at least one run-flat tire among the run-flat tires is continuously run at the run-flat state by an extreme lowering of the internal pressure, the atmosphere temperature inside tire is measured in the run-flat tire during the continuous running at the run-flat state, and a time predicted to reach to the limit temperature is calculated by using the measured values of the atmosphere temperature inside tire and data calculated from these measured values of the atmosphere temperature inside tire, and a calculated running time and/or running distance are rendered into a runnable time and/or distance up to the occurrence of the trouble state in the run-flat tire, as recited in claim 1.

In particular, Aubel relates to a general vehicle tire which is not intended to run continuously in a run-flat state. In fact, this reference fails to contemplate a run-flat tire. Rather, Aubel is directed to the operation of a vehicle tire, and more particularly, to monitoring the damage of a tire. However, Aubel fails to disclose a process for quantitatively judging a residual lifetime of the run-flat tire during continuous running in a run-flat state. Additionally, Aubel's temperature sensor is embedded in the shoulder region of the tire. Consequently, Aubel does not measure the atmospheric temperature inside the tire.

Regarding WO '806, this reference merely discloses a process wherein a user is alerted when the temperature exceeds a maximum acceptable operating temperature by measuring the

temperature of the tire. However, WO '806 fails to contemplate a process for quantitatively judging the residual lifetime of a run-flat tire during the continuous running in a run-flat state.

Moreover, as shown in Test result 1 of the present application, the present invention has an excellent effect in that a residual lifetime of a run-flat tire during continuous running at a run-flat state is precisely and quantitatively judged as compared with the applied references.

Consequently, even if combined as suggested, the suggested combination fails to disclose all the features recited in claim 1.

Thus, Applicants submit claim 1 is patentably distinguishable over the applied combination for at least these reasons. Additionally, Applicants submit claims 2, 6 and 12-13 are patentably distinguishable, at least by virtue of their dependency

**Claim Rejections – 35 U.S.C. § 103(a)**

Claims 1, 2, 4-6 and 12-13 are rejected under § 103(a) as being unpatentable over WO 01/17806 A1 in view of Nowicki et al. (US 5,945,908).

As discussed above, the Examiner relies on '806 as allegedly teaching most of the features recited in claim 1, but the Examiner applies Nowicki in this rejection contending it discloses a device which determines the expected tire life based on a tire temperature by comparing the parameters against previously stored parameters. (*Office Action*, p. 4).

In response, Applicants submit the applied combination fails to disclose, "a time predicted to reach to the limit temperature is calculated by using the measured values of the atmosphere temperature inside tire and data calculated from these measured values of the atmosphere temperature inside tire, and a calculated running time and/or running distance are

rendered into a runnable time and/or distance up to the occurrence of the trouble state in the run-flat tire," as recited in claim 1.

Regarding Nowicki, this reference is merely directed to a method of monitoring the condition of a non-rotating pneumatic tire. More particularly, Nowicki performs successive processing steps to determine whether the tire is damaged. (col. 8, lines 47-50). If the tire is determined to be damaged, an audible alarm is activated. However, nowhere does Nowicki calculate: (1) a time predicted to reach to the limit temperature; or (2) a running time and/or running distance are rendered into a runnable time and/or distance up to the occurrence of the trouble state in the run-flat tire.

Further, as set forth above, WO '806 merely discloses a process wherein a user is alerted when the temperature exceeds a maximum acceptable operating temperature by measuring the temperature of the tire. However, WO '806 fails to contemplate a process for quantitatively judging the residual lifetime of a run-flat tire during the continuous running in a run-flat state.

Accordingly, Applicants submit the applied combination fails to disclose a calculated running time and/or running distance are rendered into a runnable time and/or distance up to the occurrence of the trouble state in the run-flat tire.

Thus, Applicants submit claim 1 is patentably distinguishable over the applied combination for at least this reason. Additionally, Applicants submit claims 2, 6 and 12-13 are patentably distinguishable, at least by virtue of their dependency.

**Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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